

PMC

The first commercially available alkali muhly seed

Origin and Description

Westwater Germplasm alkali muhly seed was first collected in a damp arroyo bottom near the Westwater Spring in San Juan County, in New Mexico in 1993. This site has an elevation of 5200 ft., receives about 7 in. of annual precipitation, and is in the USDA Plant Hardiness Zone 6.

Alkali muhly is a native warm-season, perennial sod grass which may be prostrate or erect. The erect plant can be up to 20 inches (50 cm) tall, and often spreads vegetatively by slender rhizomes. The leaves can be up to 6 cm long and are light green in color. The seed head is an open panicle 5 – 15 cm long and about as wide. The flowers are purple and they occur from June to October.

Suitability

Westwater Germplasm alkali muhly does well in riparian areas of USDA Plant Hardiness zones of 6 (0 to -10 F) and 7 (0 to 10 F) in New Mexico which includes major portions of the Rio Grande, Pecos, and Canadian rivers areas. It is found on a variety of soils from sands to clays, wet to moist, and alkaline to neutral. It can be the dominant grass species on some wet sites. It can be found in dry climates when it is growing near the waters edge and receiving subsurface moisture.

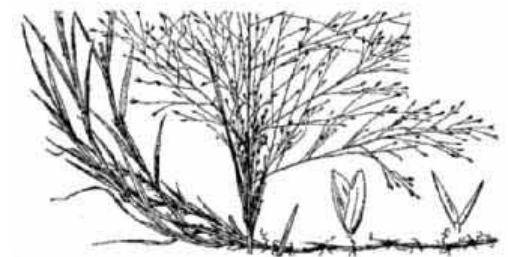
Establishment and Propagation

Westwater Germplasm alkali muhly has been established from seed for riparian revegetation plantings at the rate of 0.6 pure live seed (pls) pounds per acre or 40 pls per square foot. Irrigated seed production fields have been established by growing small, 0.9 cubic inch ($\frac{3}{4}$ " x $\frac{3}{4}$ " x $2\frac{1}{2}$ ") transplants which are planted on one foot spacing with rows on 38 inch centers. Production fields may also be direct seeded at the rate of 0.5 pls pounds per acre, or 120 seeds per linear foot on rows with 38 inch centers. The available nitrogen and phosphorous levels in early summer should be near 100 lbs per acre to achieve good production. Seed is harvested from plants by the second year.



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Widely adapted, including damp and alkaline soils





Invasion of salt cedar and the need to revegetate riparian

areas along rivers and streams in New Mexico have led to the release of Westwater Germplasm Alkali Muhly (*Muhlenbergia asperifolia* (Nees & Mey.) Parodi). This release is being made by the USDA Natural Resources Conservation Service Los Lunas Plant Materials Center, New Mexico State University, and USDI Bureau of Reclamation. It has been developed for the riparian zones in New Mexico where extensive clearing of salt cedar and other invasive exotics has recently occurred.



Alkali muhly (*Muhlenbergia asperifolia*) is

sometimes called scratchgrass. It is a common riparian grass found throughout the United States except for the southeast. Alkali muhly is an excellent soil stabilizer since it is strongly rhizomatous and grows in moist to wet, sandy to clay and neutral to alkali soils. It is commonly found on wet soils near the edge of water to open sandy areas in moist microsites of a meadow or riparian area.



It is an excellent species for seeding on the flood plain to prevent invasion of salt cedar and other invasive exotic species that tend to invade these sites. A thick grass cover will usually prevent seed to soil contact which will significantly limit establishment of these species.

alkali muhly

A common and abundant New Mexico riparian grass species

Discover more about alkali muhly by contacting

Los Lunas Plant Materials Center
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